Altmetrics for large, multidisciplinary research groups

A case study of the Leibniz Association

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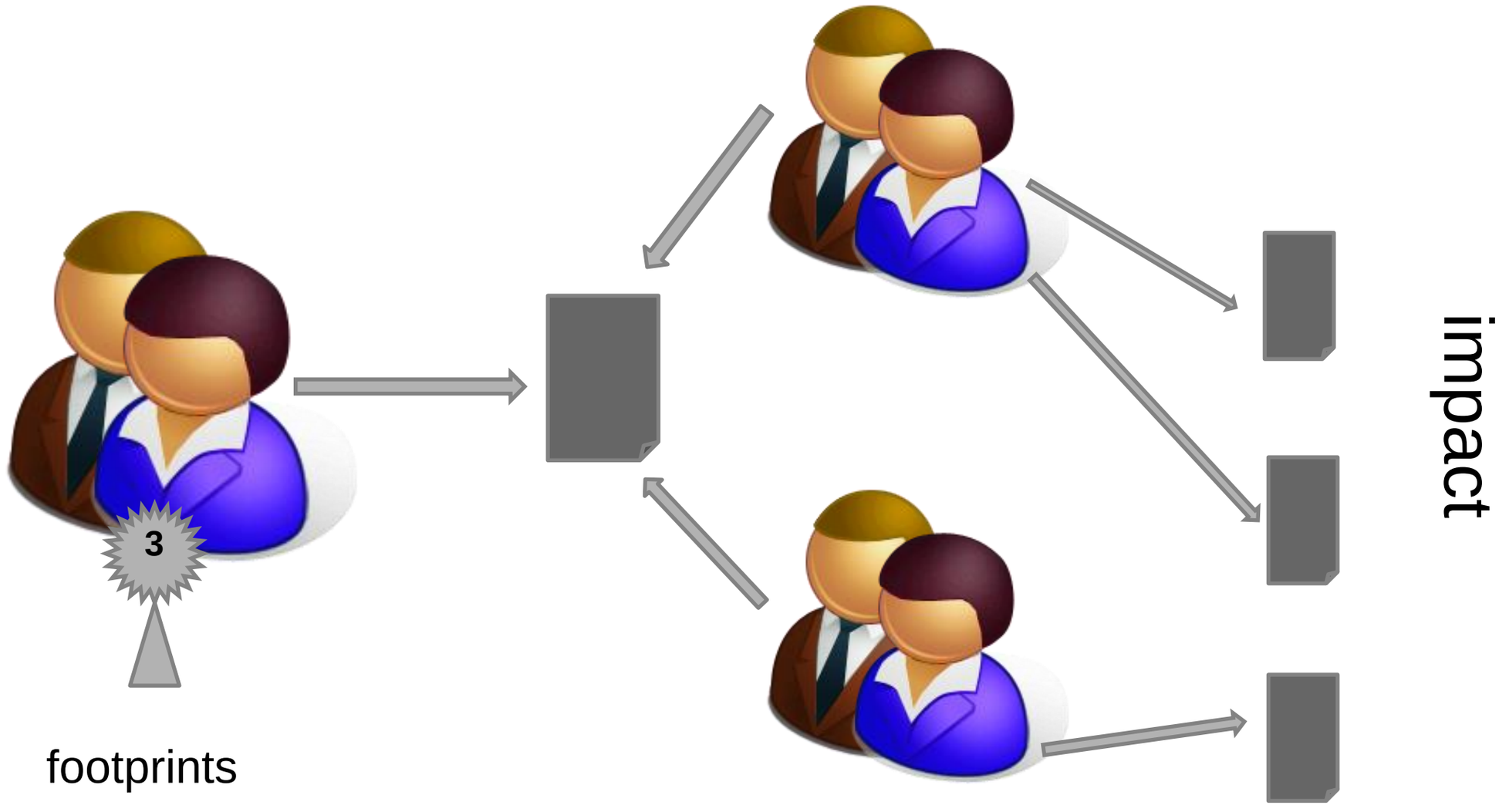
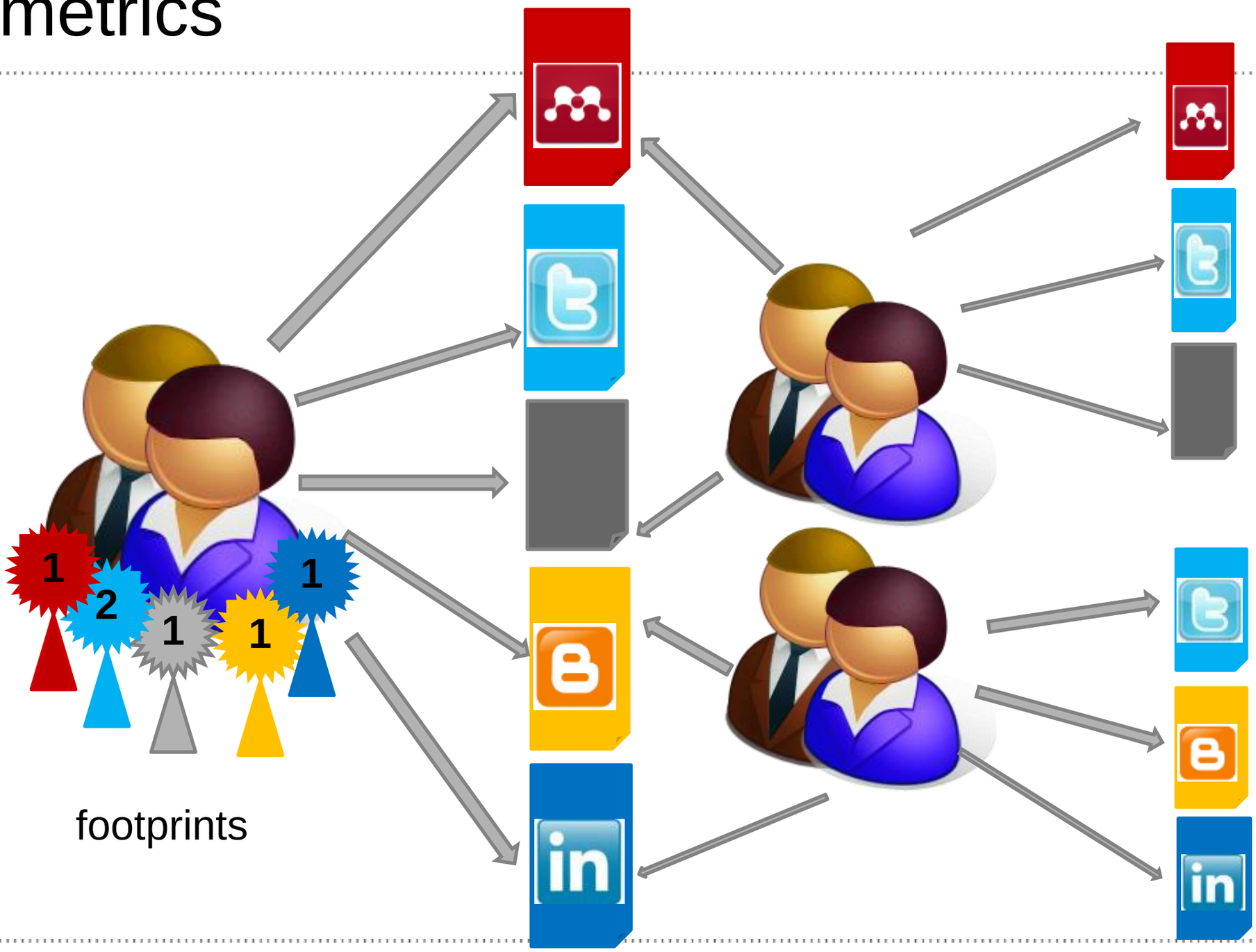
Bibliometrics



Altmetrics



Motivation for study

1. Initiatives that demand for new approaches in research evaluation (e.g., DORA)

2. Leibniz Association's evaluation guidelines ask for appropriate public outreach and engagement in public discourse → how to measure?

3. Research showed significant disciplinary differences: coverage and impact (Haustein & Siebenlist, 2011; Haustein et al., 2013; Holmberg & Thelwall, 2013; Mohammadi & Thelwall, 2013)

Research Questions

1. Where and to what extent are the publications of the institutions of the Leibniz Association covered on social media platforms?

2. What impact do publications of the members of the Leibniz Association have on users (i.e., altmetrics)?

3. What tools can be used to assess research impact? What challenges might occur?

Methods

1. Webometric Analyst
   → for the collection of missing DOIs via Crossref

2. Checked DOIs and retrieved DOIs

3. ImpactStory
   → for the collection of DOI-based altmetrics data (e.g., Twitter mentions, Mendeley readers)

Data

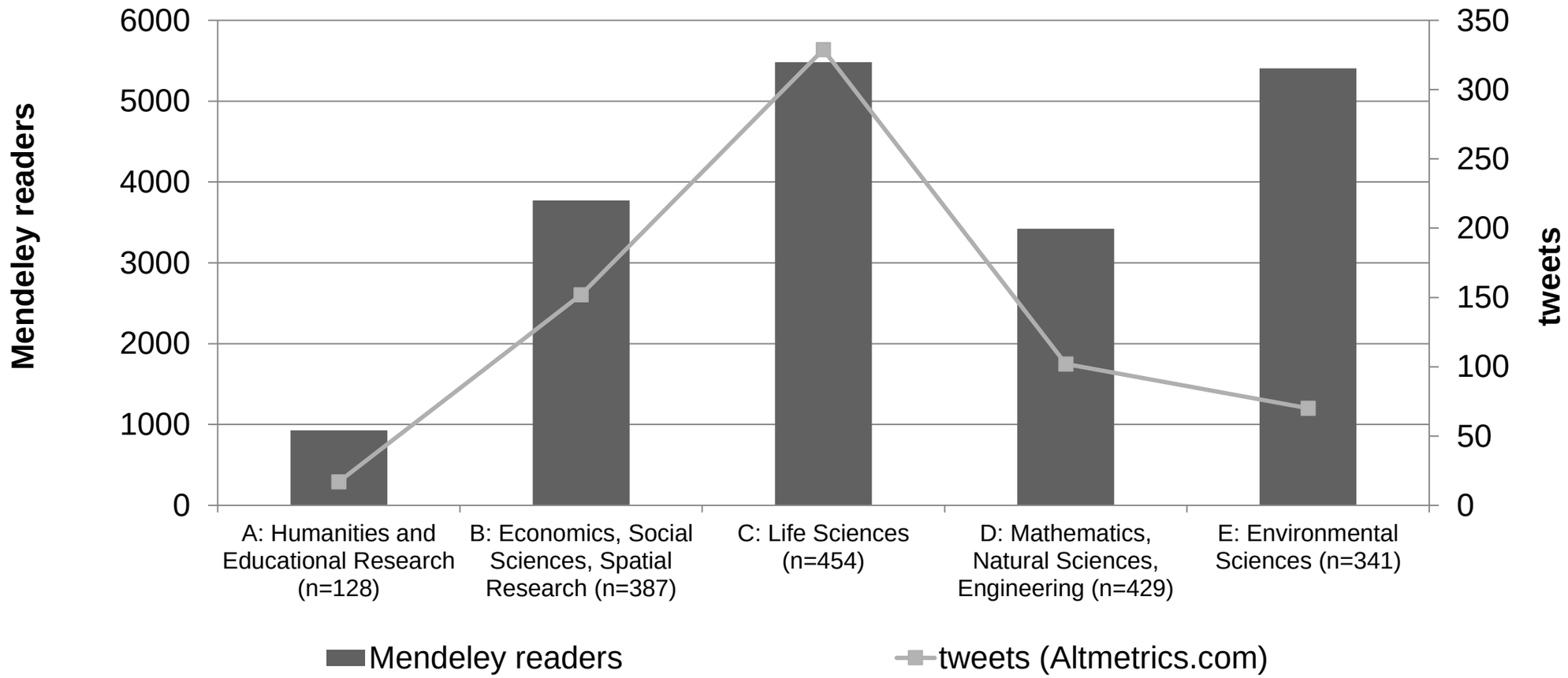
- Disciplines of the Leibniz Association
  1. humanities and educational research
  2. economics, social sciences, spatial research
  3. life sciences
  4. mathematics, natural sciences, engineering
  5. environmental sciences

Articles of 12 institutes	2.834
Correct DOIs	1.762 (62%)
Altmetrics	1.739 (99%)

- 2-3 institutes of each discipline
- Articles in conferences/ journals and book chapters
- Publication years: 2011, 2012

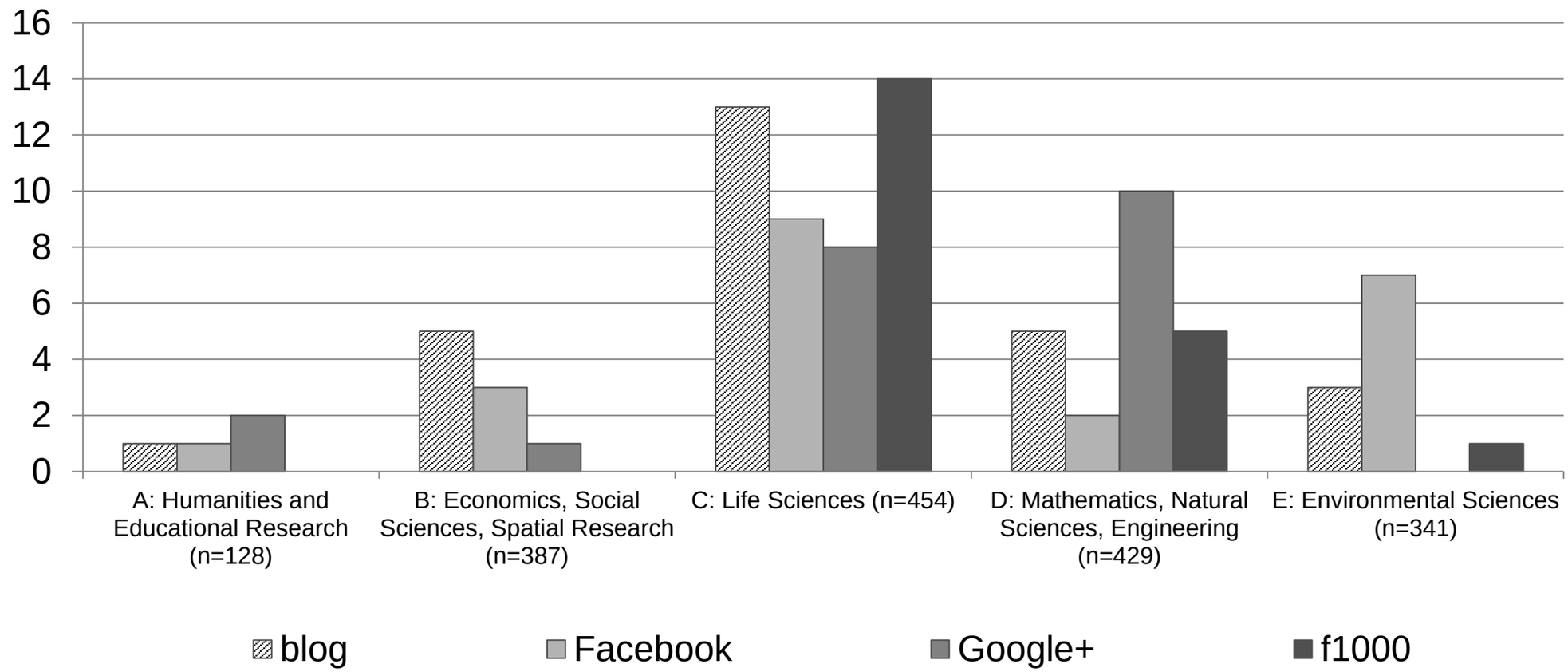
Results

- Mendeley attracts readers across disciplines
- Enviromental Science reluctantly uses Twitter



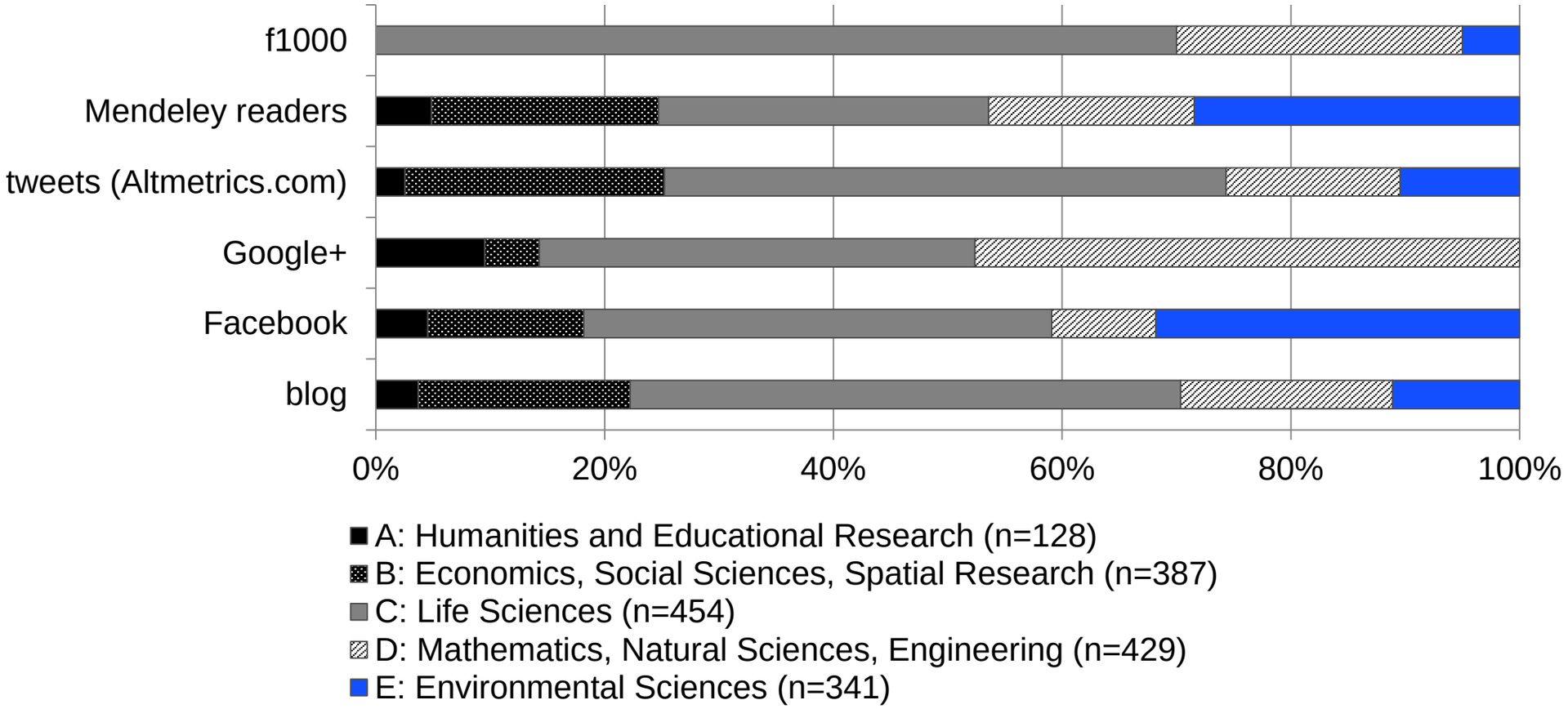
Results

- Social media use is discipline-specific



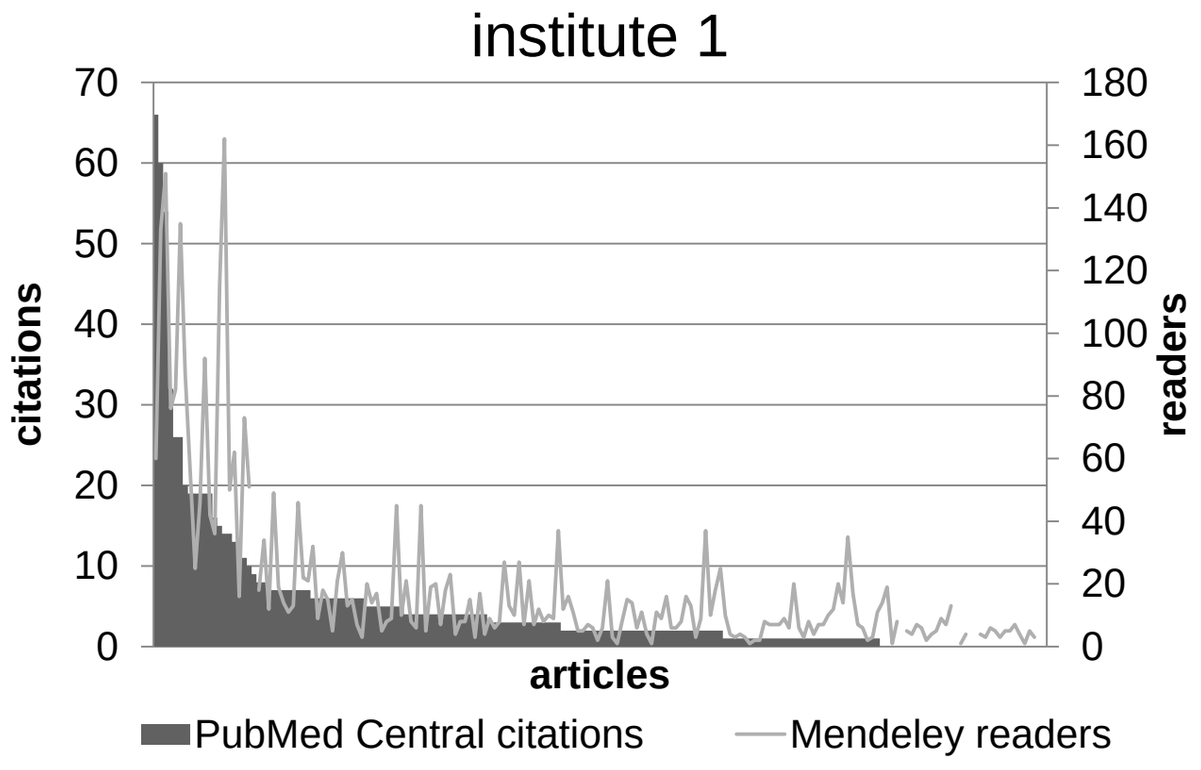
Results

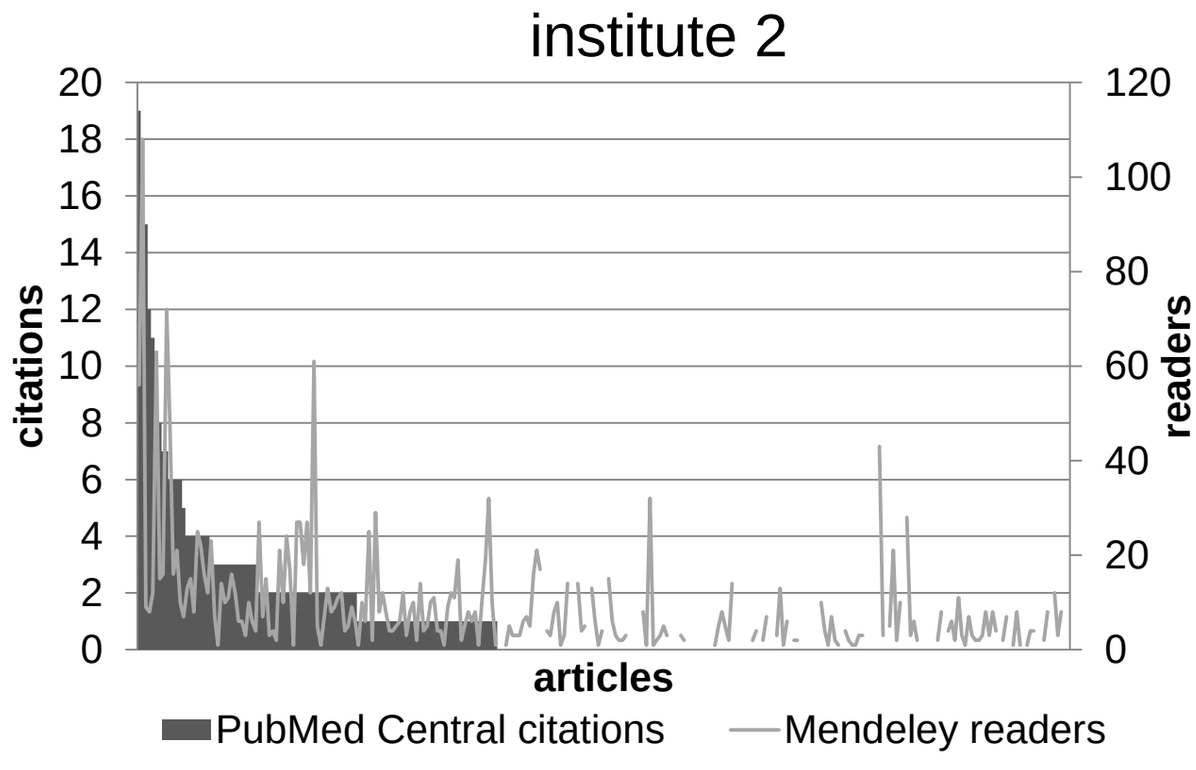
- Where do disciplines find their readers?



Results

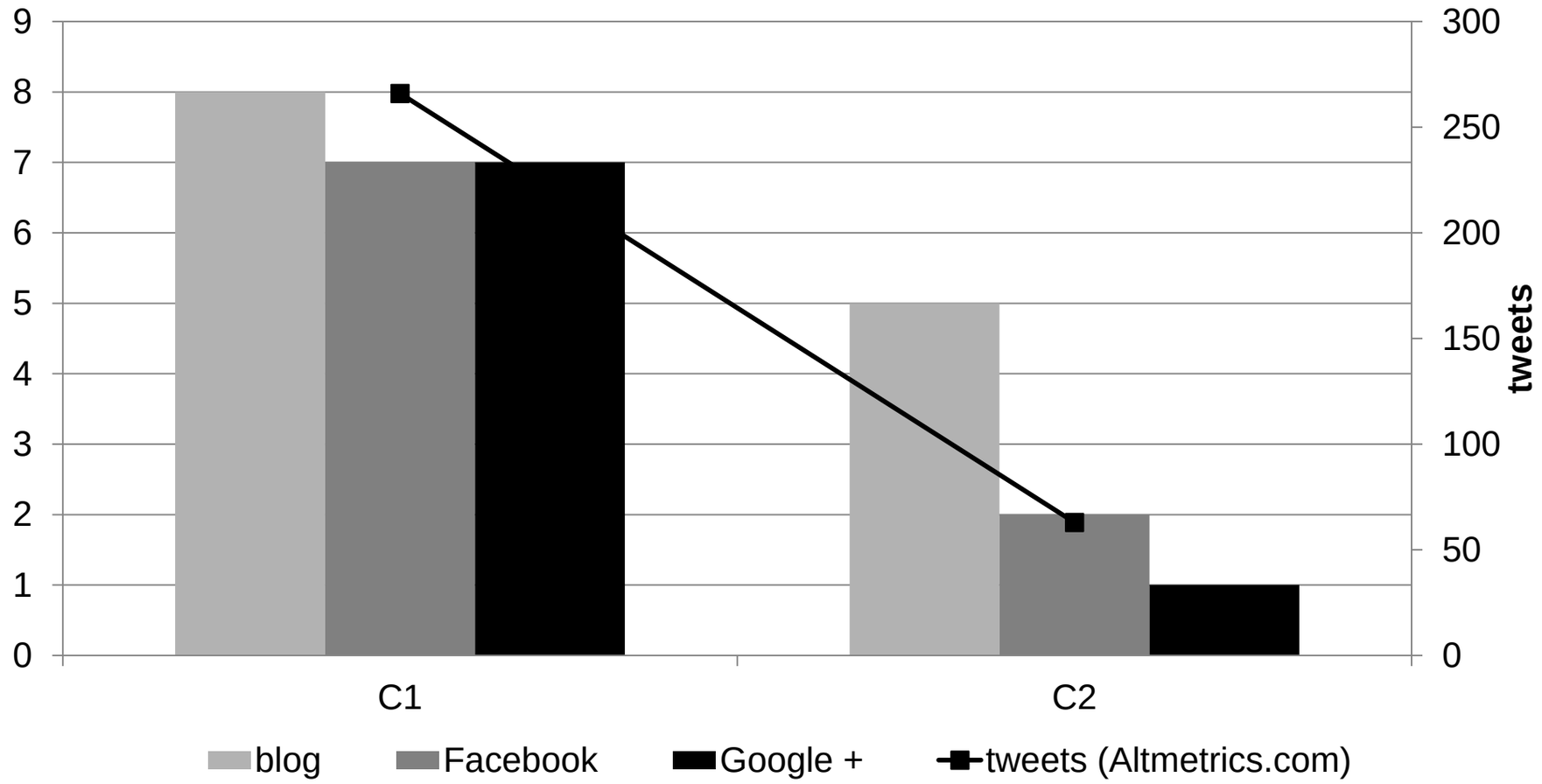
- Altmetrics can complement missing data (e.g., life sciences)





Results

- Institutes from the same discipline (e.g., life sciences) find readers on different platforms



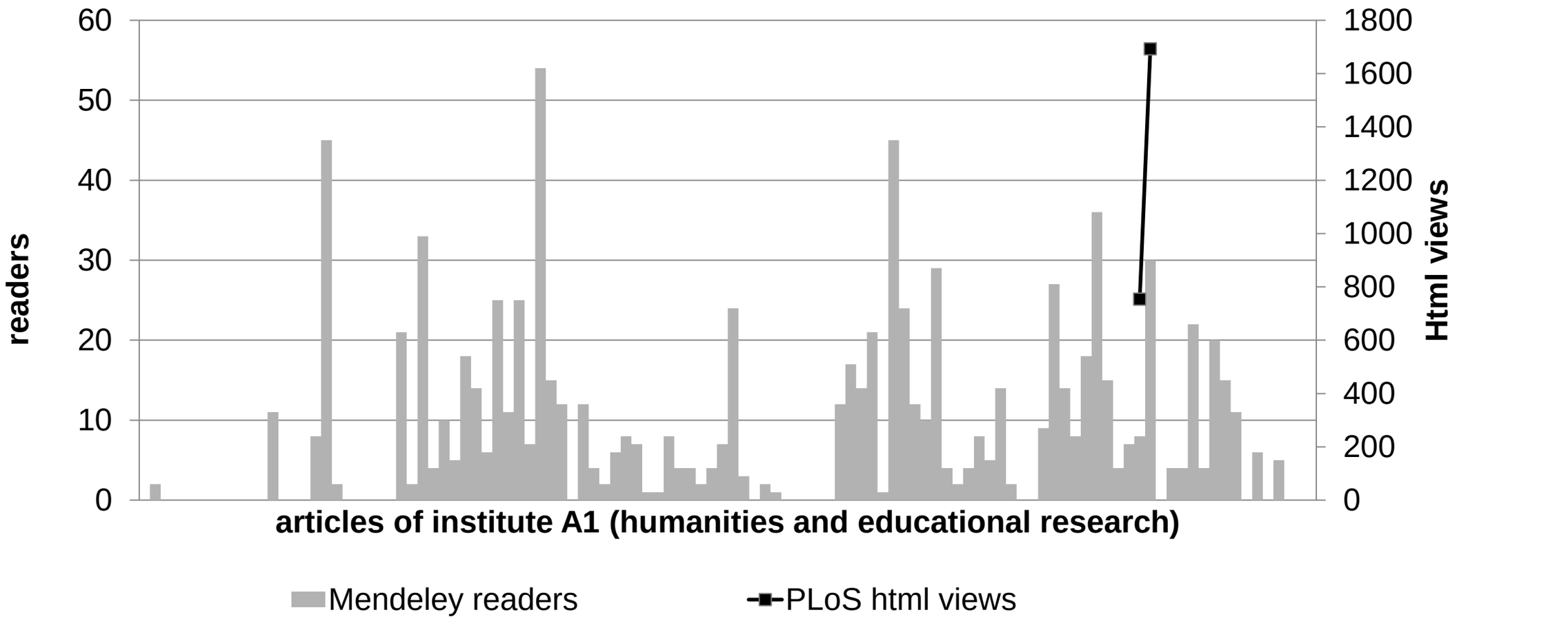
Lessons Learned

- Chosen tools determine quality of data
  - Tools and altmetrics providers change settings
- Chosen identifiers affect data
  - PubMedID is more popular than DOI
  - Missing or erroneous identfiers in social media
  - Multiple identifiers for one publication

    → Underestimation of real numbers
- Collection of publication data
  - Missing DOIs on institutes‘ websites
  - Double-entry of publication on websites
- Carry out data download at the same time

Lessons Learned

- Aggregated numbers may give wrong picture (e.g., discipline basis)
- Sum html views: 2,447 (n=2) - Sum readers: 921 (n=76)



Lessons Learned

- Mendeley is the platform which covers a substantial amount of papers and shows reasonable user activity
  - Look for good coverage/ usage ratio
- However, some disciplines prefer other platforms
  - Get to know the community preferences
  - Respect reader/ community choices
- Altmetrics should not substitute, but can complement citation data
- Comparability of altmetrics not given – same situation as in traditional citation analysis

Thank you!

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References

- Haustein, S., & Siebenlist, T. (2011). Applying social bookmarking data to evaluate journal usage. Journal of Informetrics, 5(3), 446–457.

- Haustein, S., Peters, I., Bar-Ilan, J., Priem, J., Shema, H., & Terliesner, J. (2013). Coverage and adoption of altmetrics sources in the bibliometric community. In Proceedings of the 14th International Society of Scientometrics and Informetrics Conference, Vienna, Austria, Vol. 1 (pp. 468-483). Retrieved from http://www.issi2013.org/Images/ISSI_Proceedings_Volume_I.pdf

- Holmberg, K., & Thelwall, M. (2013). Disciplinary differences in Twitter scholarly communication. In Proceedings of the 14th International Society of Scientometrics and Informetrics Conference, Vienna, Austria, Vol. 1 (pp. 567-582). Retrieved from http://www.issi2013.org/Images/ISSI_Proceedings_Volume_I.pdf

- Mohammadi, E. & Thelwall, M. (2013). Assessing the Mendeley readership of social sciences and humanities research. In Proceedings of the 14th International Society of Scientometrics and Informetrics Conference, Vienna, Austria, Vol. 1 (pp. 200-2014). Retrieved from http://www.issi2013.org/Images/ISSI_Proceedings_Volume_I.pdf